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Ag 84 Pro

For Higher Production— Soil and Water Conservation_x

Have you wondered . . .

How to boost yields per acre and increase net income . . .

How to help rebuild our food and feed reserves . . .

How to meet your share of production goals?

Your yields per acre may have held steady. Or they may be higher than in the past . . . but not as high as you would like. Or they may have dropped in spite of the better seed, fertilizer, and improved methods you are using.

Maybe you have been overlooking the one thing that makes all other good methods most effective. That is the proper use and management of soil. This, plus other modern methods, is the key to maximum production.



THE LAND IS WILLING

Our land can produce more . . . with profit . . . without damage. The land is willing and able if you give it the right chance. But, (1) unless water is conserved for crop production, (2) unless productive topsoil is kept in place, (3) unless fertility is increased and maintained at a high level, (4) unless soil is kept in good tilth, and (5) unless it is used within its capabilities—your land will not give you the highest possible production.

Conservation farming helps increase yields per acre now and keeps land in shape for continued high-level production. Soil and water conservation has helped greatly in increasing agricultural output in recent years and will help raise it still higher.

Our goal, yours and your neighbors, is real conservation—using each acre of farm and ranch land within its capabilities and treating it according to its needs for protection and improvement. The right methods used where they fit—so they will eventually be part of a complete conservation program—are an essential and basic part of a farm or ranch geared to high production.

Each inch of topsoil lost from average land means a decrease in production per acre equal to about 5 bushels of corn. One rain can wash away an inch of soil. Erosion, in effect, actually decreases the size of your acres.

CONSERVATION METHODS INCREASE PRODUCTION

Select land best capable of producing the crop you want to grow. Land best adapted to trees or meadow should be in these crops. Some land now in pasture may be good cornland. Some sloping land may produce more feed if in legumes and grasses. North Carolina land that had been growing 50 bushels

of corn per acre yielded the equivalent of 87 bushels of corn when switched to pasture. The nutrients that had cost \$1.77 as corn cost only 58 cents in the form of good pasture.

Provide plant food. In many areas a good crop of clover turned under is equal to 8 tons of manure per acre. A ton of manure equals \$6 in higher crop yields. On the average, 2 pounds of nitrogen, balanced with needed phosphate and potash, means another bushel of corn. Each 100 pounds of ammonium nitrate may boost corn yields about 12 bushels an acre.

Maintain good rotations. Land in grass and legumes a fourth or more of the time gives more total feed from the farm each year than a straight grain rotation. Grass and legumes maintain humus and reduce erosion. In Iowa, corn grown in a 3-year rotation yielded 80 bushels an acre. Land in continuous corn for 10 years yielded about 20 bushels an acre. **Contouring** usually increases corn yields by more than a tenth . . . wheat by about a fifth . . . other crops by a tenth to a third.

Stubble mulching and contouring increased corn yields 7.2 bushels an acre in tests at the Hastings, Nebr., Soil Conservation Experiment Station.

Contour strip cropping increases yields . . . saves soil.

Grassed waterways prevent gullies . . . save machinery repairs . . . reduce labor.



Terracing reduces loss of soil . . . often increases yields.

Winter cover crops protect soil and add humus . . . increase moisture-holding ability of soil . . . make soil work easier.

Drainage. Improving existing systems will greatly increase production on many farms. Sometimes a short ditch or a tile line is all that is needed to correct wet spots or corners of productive fields. (Be sure land is capable of high production and not better suited for other purposes before it is drained.)

Irrigation. Improving existing systems . . . land leveling . . . applying the right amount of water at the right time, all boost production and lower costs. Southwestern farmers and ranchers report that increasing efficiency of their irrigation boosted yields 30 to 200 percent. In Washington, tests by the Kittitas Soil Conservation District showed that improved irrigated pastures produced 549 pounds of beef per acre in contrast to 200 to 250 for native irrigated pastures.

Improving permanent pastures by liming, fertilizing, and reseeding with a legume-grass mixture usually more than doubles forage production and helps maintain fertility and reduce erosion. Many farmers now produce 400 to 500 pounds of beef per acre from improved pasture. Dairy farmers report comparable results with dairy cattle.

Improving range land. Good grasslands control erosion and keep the land productive. Ranchers find beef production per acre is increased 2 to 4 times by killing brush and reseeding. Southwestern range in "good" condition produced 14.3 pounds of beef per acre. Range in "poor" condition produced only 8.9 pounds. Adequate stock water supplies make it possible to use range more efficiently.

A 6-year test on annual range in California showed that ammonium phosphate (16-20-0) increased hay yield per acre from 1,273

pounds to 4,049 pounds. Application rate was 400 pounds the first year and 200 pounds each following year. This increase equals 3.4 animal-unit-months of grazing per acre. Fertilized annual range was ready 7 weeks earlier. *Moisture-conserving practices* include contouring, strip cropping, better rotations, green manure, stubble mulching, level terraces, woodland management, and others. Coupled with adequate fertilizer and other proved methods, the supply of moisture in soil determines how much the land will produce.

During three drought years (1949-51), corn at the Blacklands Experimental Watershed, Waco, Tex., on a conservation-farmed watershed yielded almost half again as much as one farmed the old way. Cotton yields were two-thirds higher.

Forest or woodland planting and improvement. Land not suitable for cultivated crops or forage can be planted to trees to protect it and produce a valuable crop of timber. Production can be increased by practices such as thinning, removing diseased trees, fencing out livestock, and fire protection.

COMPLETE PROGRAM PAYS OFF

A Vernon County, Wis., farmer in 1939 started a complete farm conservation program covering every acre. He used all needed soil and water conservation methods and other modern techniques in the right combination. In 10 years, corn yields per acre went up from 51 to 90 bushels—an increase of 39. At the same time the county average increased from 42 to 49—an increase of 7 bushels an acre. The increase under conservation farming was five times as large as the county average. Similar examples are found throughout the country.

TECHNICAL HELP

You will want technical help on many practices to assure proper design, construction, and the right combination. For example: Proper outlets must be provided for terraces, unless they are level terraces to keep water on the land. Grassed waterways usually are needed with contouring or strip cropping. Terraces, ponds, drainage or irrigation systems, and other measures requiring engineering skill may do more damage than good if improperly laid out and constructed. Fertilizer applied where it is not needed or on a field not protected from erosion may be a waste of money and scarce materials.

THE TIME IS NOW

You may build on what you have done in the past . . . start the conservation measures you can this year . . . plan more for next year. Start right. Production is an immediate need . . . and a long-time job.

Educational, technical, and financial help are available to you from your Soil Conservation District, Production and Marketing Administration Committee, Soil Conservation Service, County Agent, or Forest Service.

